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Anti-MAP3K7 Monoclonal Antibody

Catalog # ABO14473

Product Information

Application	WB, IHC, IF, ICC, FC
Primary Accession	O43318
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-MAP3K7 Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	6885
Other Names	Mitogen-activated protein kinase kinase kinase 7, 2.7.11.25, Transforming growth factor-beta-activated kinase 1, TGF-beta-activated kinase 1, MAP3K7 {ECO:0000303|PubMed:28397838, ECO:0000312|HGNC:HGNC:6859}
Calculated MW	67196
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 ICC/IF 1:100-1:500 FC 1:50
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: ACHF-13
Immunogen	A synthesized peptide derived from human MAP3K7
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

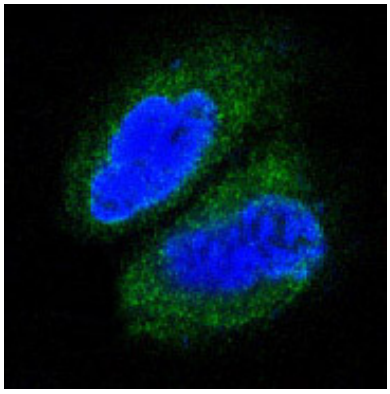
Protein Information

Name	MAP3K7 {ECO:0000303|PubMed:28397838, ECO:0000312|HGNC:HGNC:6859}

Function	Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway (PubMed:10094049, PubMed:11460167, PubMed:12589052, PubMed:16845370, PubMed:16893890, PubMed:21512573, PubMed:8663074, PubMed:9079627). Plays an important role in the cascades of cellular responses evoked by changes in the environment (PubMed:10094049, PubMed:11460167, PubMed:12589052, PubMed:16845370, PubMed:16893890, PubMed:21512573, PubMed:8663074, PubMed:9079627). Mediates signal transduction of TRAF6, various cytokines including interleukin-1 (IL-1), transforming growth factor- beta (TGFB), TGFB-related factors like BMP2 and BMP4, toll-like receptors (TLR), tumor necrosis factor receptor CD40 and B-cell receptor (BCR) (PubMed:16893890, PubMed:9079627). Once activated, acts as an upstream activator of the MKK/JNK signal transduction cascade and the p38 MAPK signal transduction cascade through the phosphorylation and activation of several MAP kinase kinases like MAP2K1/MEK1, MAP2K3/MKK3, MAP2K6/MKK6 and MAP2K7/MKK7 (PubMed:11460167, PubMed:8663074). These MAP2Ks in turn activate p38 MAPKs and c-jun N- terminal kinases (JNKs); both p38 MAPK and JNK pathways control the transcription factors activator protein-1 (AP-1) (PubMed:11460167, PubMed:12589052, PubMed:8663074). Independently of MAP2Ks and p38 MAPKs, acts as a key activator of NF-kappa-B by promoting activation of the I-kappa-B-kinase (IKK) core complex (PubMed:12589052, PubMed:8663074). Mechanistically, recruited to polyubiquitin chains of RIPK2 and IKBKG/NEMO via TAB2/MAP3K7IP2 and TAB3/MAP3K7IP3, and catalyzes phosphorylation and activation of IKBKB/IKKB component of the IKK complex, leading to NF-kappa-B activation (PubMed:10094049, PubMed:11460167). In osmotic stress signaling, plays a major role in the activation of MAPK8/JNK1, but not that of NF-kappa-B (PubMed:16893890). Promotes TRIM5 capsid-specific restriction activity (PubMed:21512573). Phosphorylates RIPK1 at 'Ser-321' which positively regulates RIPK1 interaction with RIPK3 to promote necroptosis but negatively regulates RIPK1 kinase activity and its interaction with FADD to mediate apoptosis (By similarity). Phosphorylates STING1 in response to cGAMP-activation, promoting association between STEEP1 and STING1 and STING1 translocation to COPII vesicles (PubMed:37832545).
Cellular Location	Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Note=Although the majority of MAP3K7/TAK1 is found in the cytosol, when complexed with TAB1/MAP3K7IP1 and TAB2/MAP3K7IP2, it is also localized at the cell membrane
Tissue Location	Isoform 1A is the most abundant in ovary, skeletal muscle, spleen and blood mononuclear cells. Isoform 1B is highly expressed in brain, kidney and small intestine. Isoform 1C is the major form in prostate. Isoform 1D is the less abundant form

Images

Immunofluorescent analysis of A431 cells, using TAK1 Antibody .



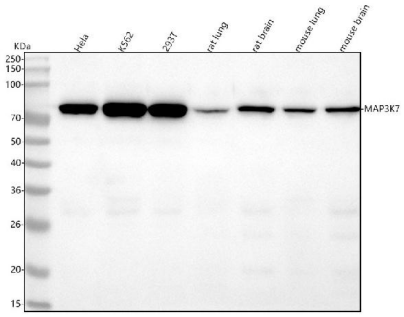


Figure 1. Western blot analysis of MAP3K7 using anti-MAP3K7 antibody (M01458).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human K562 whole cell lysates,
Lane 3: human 293T whole cell lysates,
Lane 4: rat lung tissue lysates,
Lane 5: rat brain tissue lysates,
Lane 6: mouse lung tissue lysates,
Lane 7: mouse brain tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MAP3K7 antigen affinity purified monoclonal antibody (Catalog # M01458) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for MAP3K7 at approximately 75 kDa. The expected band size for MAP3K7 is at 67 kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.